

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a semiconductor substrate;

5 a first well of a prescribed conductivity type selectively formed in a surface of said semiconductor substrate;

a second well of the same conductivity type as said prescribed conductivity type selectively formed in said surface of said semiconductor substrate;

10 a first conductive layer across said first well and said second well in said surface of said semiconductor substrate with an end provided on said first well and another end provided on said second well, formed by lowering the resistivity of said surface; and

a first contact electrically connected with said first well.

15 2. The semiconductor device according to claim 1, wherein said first contact is in contact with said first conductive layer.

3. The semiconductor device according to claim 2, further comprising:

a second contact in contact with said first conductive layer.

20 4. The semiconductor device according to claim 3, wherein said first contact is arranged in opposition to said first well through said first conductive layer while said second contact is arranged in opposition to said second well through said first conductive layer.

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5. The semiconductor device according to claim 1, further comprising:
a second conductive layer formed in said surface of said semiconductor substrate by lowering the resistivity of said surface and provided on said first well without being in contact with said second well, wherein
5 said first contact is in contact with said second conductive layer.

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10 6. The semiconductor device according to claim 1, wherein
said first conductive layer includes at least one of an impurity introduction layer of the same conductivity type as said prescribed conductivity type and a compound layer of the material for said semiconductor substrate and a metal.

7. The semiconductor device according to claim 6, wherein
said first conductive layer has lower resistivity than said first well and said
15 second well.

8. The semiconductor device according to claim 5, wherein
said second conductive layer includes at least one of an impurity introduction layer of the same conductivity type as said prescribed conductivity type and a compound layer of the material for said semiconductor substrate and a metal.
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9. The semiconductor device according to claim 8, wherein
said second conductive layer has lower resistivity than said first well.

10. The semiconductor device according to claim 1, wherein
25 said first well and said second well have different impurity profiles.

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